

REMARKS / ARGUMENTS

The action by the Examiner in this application, together with the reference cited, has been given careful consideration. Following such consideration, claim 1 has been amended to address the Section 112 rejection raised by the Examiner. The Examiner's suggestion with respect to claim language to overcome this rejection is appreciated. In addition, claim 1 has been amended to indicate that the tension setting device is arranged on the "underside of said platform." The remaining claims are unchanged. It is respectfully requested that the Examiner reconsider the claims in their present form, together with the following comments and allow the application.

As the Examiner well knows, the present invention is directed to an article conveying apparatus for conveying articles between article storage sections. A problem with prior article conveying apparatus, such as the apparatus disclosed in Applicant's prior Japanese Publication No. 01-092108 (Tanaka), is that the raising and lowering cables are guided along the vertical support masts. As shown in the Tanaka reference, guide cables 11 and 12 are attached to the underside of the platform generally at the lateral edges, i.e., a "front side end" and a "rear side end" of the platform. In this position, the raising and lowering cables might possibly be swung into engagement with the masts and interfere therewith when the stacker crane is moved between article storage locations. To avoid the raising and lowering cables interfering with the vertical supports, tension on the raising and lowering cables must be increased to take up any "slack" or "play" in the cables. As will be appreciated, the increased tension in the cables requires a more rigid chain-tensioning device. In addition, because of the greater tension in the cables, a more expensive, higher-strength cable must be used to withstand the higher tension.

The present invention overcomes these problems by moving the raising and lowering cables away from the support masts to a vicinity of a central portion of the truck body. The cables are guided vertically from the central portion of the truck body to a tension setting device disposed on the underside of the platform. As a result of this arrangement, the returning portions of the raising and lowering cables are disposed away from the raising and lowering masts. This prevents the returning portions of the raising and lowering cables from interfering with the raising and lowering masts. As a result of this design, the tension on the raising and lowering cable need only be sufficient to prevent separation, i.e., disengagement, of the cable from the winding sprockets. As a result, it is possible to reduce the burden, i.e., the tension on the raising and lowering cables, thereby enabling use of a less rigid tensioning device and possibly the use of a lighter weight, i.e., lower strength, cable. As a result, the overall cost of the assembly is reduced.

The Examiner has rejected the claims under 35 U.S.C. Section 103(a) as being unpatentable over Tanaka (JP 01-092108 A). The Examiner takes the position that the Tanaka reference discloses all of the recited elements of the claims, but notes that the Tanaka reference fails to disclose the location of the tension setting device on the platform. With respect to this difference, the Examiner states that: "rearranging parts requires no more than ordinary skill in the art."

Applicant respectfully submits that in addition to failing to disclose the location of the tension setting device on the platform, the Tanaka reference likewise fails to disclose a pair of raising and lowering cables guided from the front side end and the rear side end of the upper platform to "a vicinity of a central portion of the running truck body" and further fails to disclose

raising and lowering cables being “guided together vertically from the vicinity of the central portion of the running truck body to a vicinity of the central lower portion of said platform.” Still further, the Tanaka reference does not teach, suggest or show the ends of the raising and lowering cables being “connected to said tension setting device in a vicinity of the lower portion of said platform.”

With respect to the Examiner’s statement that: “rearranging parts requires no more than ordinary skill in the art,” it appears that the Examiner is relying upon MPEP Section 2144.04 VI C as the basis for the rejection. Applicant wishes to point out that this section states:

“The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant’s specification, to make the necessary changes in the reference device.” *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984).

The Federal Circuit has also made it clear that a prior art reference must “suggest” modifications.

“The fact that a prior art device could be modified so as to produce the claimed device is not a basis for an obviousness rejection unless the prior art suggested the desirability of such a modification.” *In re Gordan*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

“Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, “[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.” *In re Laskowski*, 871 F.2d 115, 10 USPQ2d 1397 (Fed. Cir. 1989).

Applicant respectfully submits that placing a tensioning device on the underside of the platform is not taught or suggested by the Tanaka reference. Viewing the Tanaka reference alone without reference to the present specification, there is nothing in the Tanaka reference to teach, suggest or show moving the ends of the cable to a central position underneath the platform and connecting the ends of the cable to a tensioning device on the underside of the platform. Applicant respectfully submits that it is only with the benefit of hindsight after reviewing Applicant's disclosure that one can make an argument that such a modification would be obvious. The Tanaka reference does not teach, suggest or show the claimed structure or the benefit of such structure as set forth above.

The Examiner in the Office Action also refers to Japanese Language Document No. H2-18403. Applicant respectfully submits that this reference does not teach, suggest or show a tensioning device on the underside of the platform, and further, does not show cables guided to a central portion of the truck body beneath the platform for attachment to a tensioning device. In this respect, structure of the '403 reference has the same problems as the Tanaka reference, namely, a portion of the raising and lowering cables being near the vertical masts where such cables could possibly interfere with such masts.

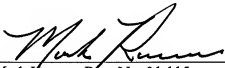
For the foregoing reasons, Applicant respectfully submits that the claims in their present form are distinguishable from the cited references. By repositioning the raising and lowering cables to a central portion of the running truck body beneath the platform and guiding the cables together vertically to a tension setting device on the other side of the platform, the present structure reduces the likelihood of cables interfering with the vertical masts and further enables use of a less rigid tensioning setting device and lower strength cables in the disclosed structure.

The foregoing changes thus provides a less costly structure that is less likely to have mechanical problems due to the possibility of cable interference or high tensioning forces required in the prior art devices. It is respectfully submitted that prior references do not teach, suggest or show the claimed structure, and favorable action is therefore respectfully requested.

If there are any fees necessitated by the foregoing communication, please charge such fees to our Deposit Account No. 50-0537, referencing our Docket No. MM8845US.

Respectfully submitted,

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